



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,994	12/18/2000	Mikael Bisgaard-Bohr	9684	4293

26890 7590 07/27/2004

JAMES M. STOVER
NCR CORPORATION
1700 SOUTH PATTERSON BLVD, WHQ4
DAYTON, OH 45479

EXAMINER

NGUYEN, CINDY

ART UNIT	PAPER NUMBER
----------	--------------

2171

DATE MAILED: 07/27/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/739,994

Applicant(s)

BISGAARD-BOHR ET AL.

Examiner

Cindy Nguyen

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3-9, 11-17, 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-17 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

In view of the appeal brief filed on 05/05/04, PROSECUTION IS HEREBY REOPENED. As set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1, 9 and 17 are rejected under ***35 USC § 112 of the second paragraph.***

It is not clear to the Examiner, what is a department table. A department table is a sale department or applicant mean a department table is something else.

1. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 7, 9, 11, 15, 17, 19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S. 6,263,337) (Fayyad) in view of Eder (U.S. 6,321,205).

Regarding claims 1, 9 and 17, Fayyad disclose: a method, an apparatus for a data structure, for analyzing data in a computer-implemented data mining system (12, fig. 2 and corresponding text, Fayyad), wherein the data structure is a data model that comprises a Gaussian Mixture Model that stores transactional data (col. 9, lines 22-67, Fayyad) and the data model is mapped to aggregate the transactional data for cluster analysis (col. 8, lines 34-46, Fayyad).

However, Fayyad didn't disclose: a basket table that contains summary information about the transactional data, an item table that contains information about individual items referenced in the transactional data, and a department table that contains aggregate information about the transactional data. On the other hand, Eder disclose: a basket table that contains summary information about the transactional data transactional data (table 6, col. 13, lines 21-47, Eder), an item table that contains information about individual items referenced in the transactional data (table 7 and 8, col. 14, lines 9 to col. 15, lines 13, Eder), and a department table that contains aggregate information about the transactional data (table 10, col. 15, lines 35 to col. 16, lines 7, Eder). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include summary table about transactional data, table contains information about individual items referenced data and department table that contains aggregate information about the transaction data in the system of Fayyad as taught by Eder. The motivation being to enable the user to group the useful information about the transactional data into subgroups and to organize data in the data mining system.

Regarding claims 3, 11 and 19, most of the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition Fayyad/Eder disclose: Wherein the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data (col. 8, lines 35-64, Fayyad).

Regarding claims 7, 15 and 23, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Eder disclose: wherein the data model is mapped into a database view to produce a correct level of aggregation for statistical analysis (col. 8, lines 34-44, Fayyad).

3. Claims 4, 6, 8, 12, 14, 16, 20, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S 6263337) (Fayyad) in view of Eder (U.S 6321205) and further in view of Lazarus et al. (U.S 6430539) (Lazarus).

Regarding claims 4, 12 and 20, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. However, Fayyad/Eder didn't disclose: wherein the data model is stored in a relational database managed by a relational database management system. On the other hand, wherein the data model is stored in a relational database managed by a relational database management system. On the other hand, Lazarus discloses: wherein the data model is stored in a relational database managed by a relational database management system (col. 10, lines 65 to col. 11, lines 7, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is stored in relational database in the combination system of Fayyad/Eder as taught by Lazarus. It would have been obvious to one of ordinary skill in the art at the time of the

Art Unit: 2171

invention to use the cluster analysis groups the transactional data into coherent groups according to perceived similarities in the transactional data.

Regarding claims 8, 16 and 24, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17 above, respectively. In addition, Fayyad/Eder /Lazarus discloses: wherein the data model is comprised of one row per transaction in the transactional data (table 3 and col. 14, lines 15-51, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include transaction step of one row per transaction in the transaction data in the combination system of Fayyad/Eder as taught by Lazarus. The motivation being to enable the user to process one transaction data at the time to avoid corruption of data by the system.

Regarding claims 6, 14 and 22, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. In addition, Fayyad/Eder/Lazarus discloses: wherein the data model is mapped into a single flat table format to produce a correct level of aggregation for statistical analysis (table 3 and col. 14, lines 15-51, Lazarus). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is mapped into a single flat table in the combination system of Fayyad/Eder as taught by Lazarus). The motivation being to enable the user to implement data model into a single format and classifying data in the table.

Art Unit: 2171

4. Claims 5, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fayyad et al. (U.S 6263337) (Fayyad) in view of in view of Eder (U.S 6321205) and further in view of Van Huben et al. (U.S 6327594) (Van).

Regarding claims 5, 13 and 21, all the limitations of these claims have been noted in the rejection of claims 1, 9 and 17, respectively. However, Fayyad/Eder didn't disclose: wherein the data model is accessed from a relational database managed by a relational database management system. On the other hand, Van discloses: wherein the data model is accessed from a relational database managed by a relational database management system (col. 12, lines 24-50, Van). Thus, at the time invention was made, it would have been obvious to a person of ordinary skill in the art to include data model is accessed from relational database in the system of Fayyad as taught by Van. The motivation being to enable the user to access to the repositories and modify information in the relational database.

5. *Contact information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on 8:30-5:00 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2171

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CN

Cindy Nguyen
July 21, 2004


WAYNE AMSBURY
PRIMARY PATENT EXAMINER